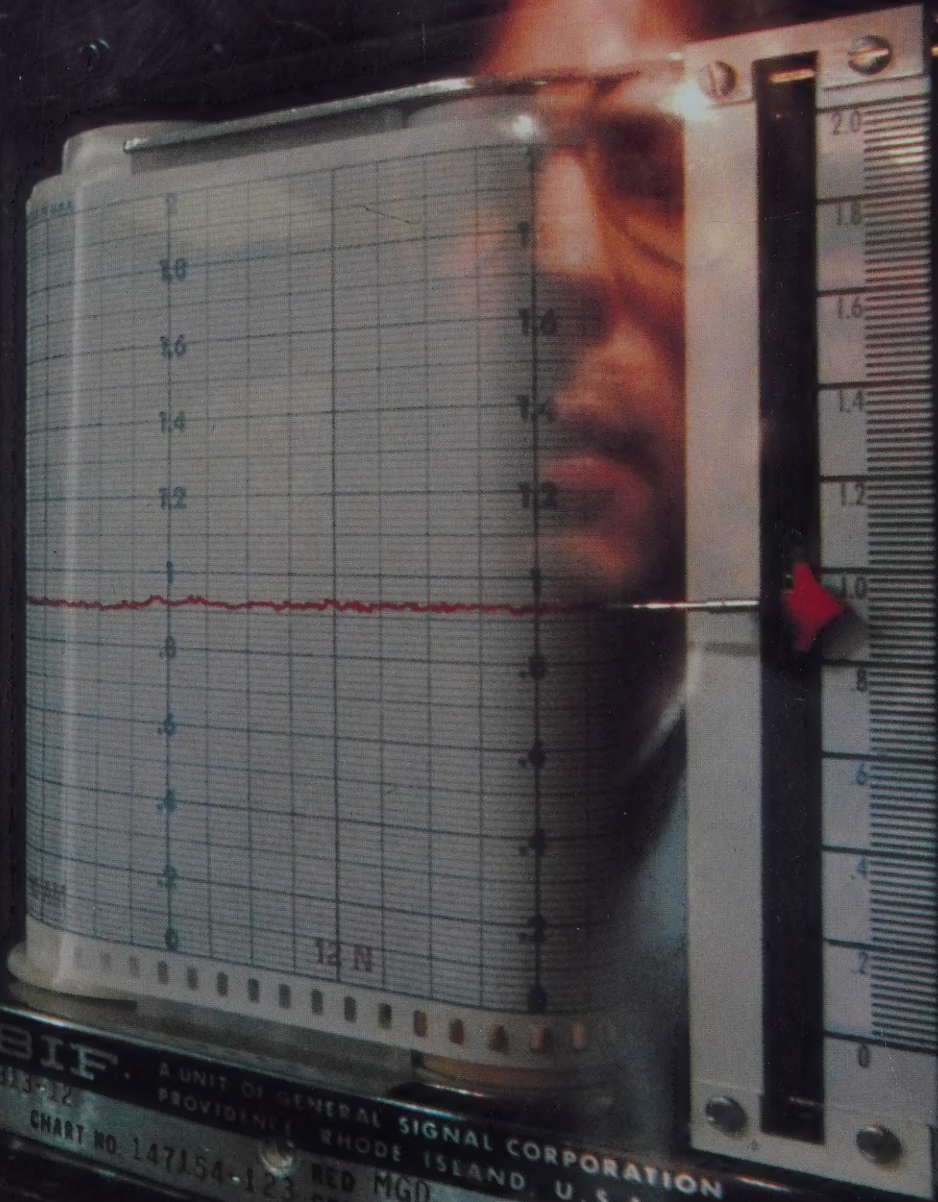


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Annual Report 1977

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# General Signal Corporation

General Signal's leadership positions in markets of high social priority—pollution control, railroads and rail mass transit, and life safety—contributed to continued growth in 1977. During the year, another market area of critical importance to society was entered through the acquisition of key product lines for the distribution, control and use of energy in electric form. Participation in these growth markets affords General Signal the opportunity to continue to outperform the economy in the years ahead.

**Cover**  
General Signal supervisory control panel at a major water treatment facility provides continuous monitoring of operations. Such panels are in use throughout the U.S. and typify the company's technological leadership in the field of water pollution control. General Signal is also a prime factor in other high social priority markets—rail transportation, life safety and electrical energy.

**Annual Meeting**  
The 1978 annual meeting of shareholders will be held at 11:00 A.M. on Friday, April 21, 1978, at 280 Park Avenue (street level), New York City.

**Form 10-K**  
A copy of the company's fiscal 1977 Annual Report on Form 10-K, filed with the Securities and Exchange Commission, will be available after April 1, 1978. A copy of this report may be obtained by writing to the Secretary of the Corporation.

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# Financial Highlights

(in thousands)	1977	1976	% Increase
Net sales	\$875,500	\$797,900	9.7%
Earnings before income taxes	\$ 96,700	\$ 78,300	23.5%
Net earnings	\$ 47,900	\$ 39,800	20.4%
Earnings per average share of common stock	\$2.43	\$2.03	19.7%
Dividends paid per common share	\$ .60	\$ .42	42.9%
Working capital	\$258,300	\$244,500	5.6%
Total assets	\$601,000	\$534,000	12.5%
Return on stockholders' equity	14.4%	13.3%	
Total employees	20,000	19,600	

## Net Sales: \$875.5 million in 1977



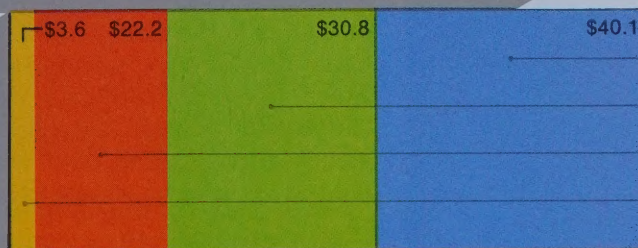
Environmental and Industrial Process Controls

Transportation Controls

Energy Distribution and Control

Home Appliances

## Pretax Earnings: \$96.7 million in 1977



Environmental and Industrial Process Controls

Transportation Controls

Energy Distribution and Control

Home Appliances



# To the Shareholders



Nathan R. Owen, chairman, and Harold A. Strickland, Jr., president, during recent plant inspection tour of the newly-acquired Hevi-Duty Electric unit in Goldsboro, N.C. This

operation, which manufactures liquid-immersed power and general-purpose, dry-type transformers, is part of 1977 acquisition of key product lines that give General Signal

leadership positions in another market of high social priority—electric energy distribution and control.

## The Record

General Signal had another good year in 1977. Sales totaled a record \$876 million, a 10% increase from a year ago. Net income and earnings per share also established new highs, gaining 20% to \$47.9 million and \$2.43, respectively. Pretax return on sales rose to 11.0% from 9.8% in 1976.

Return on stockholders' equity improved from 13.3% to 14.4%, and our annual dividend rate was increased from 60 cents paid in 1977 to the current indicated rate of 80 cents, a gain of 33%. All financial data has been restated on a pooling of interests basis to reflect the acquisition of Sola Basic Industries, Inc. on September 30, 1977, and the 100% stock distribution to shareholders on July 1, 1977.

## Entry Into Energy Markets

The acquisition of Sola Basic Industries adds an important new sector to our business, combining General Signal's longstanding leadership in such markets of high social priority as water pollution control, railroads and rail mass transit, and life safety and property protection with Sola Basic's unique position in the distribution, control and use of energy in electric form.

For quite some time, we had been looking for a logical way to position ourselves in the energy market. In particular, we were looking for product lines in the fields of electric power distribution, voltage regulation and electrical processing, all of which our studies showed us should grow faster



than the electric power generating industry. The Sola Basic acquisition brings key positions in these markets, which are beginning to develop high social priority as an outgrowth of the worldwide concern over increasing shortages of oil and natural gas.

### **Product Group Realignment**

To reflect this new segment of General Signal and to more succinctly classify our involvement in various controls markets, we have reported results for 1977 in three major product groups plus home appliances.

The *environmental and industrial process controls* group—our largest product group—accounted for \$319 million in sales and \$40.1 million in pretax earnings. This group's composition has not changed.

The *transportation controls* group accounted for \$228 million in sales and \$30.8 million in pretax earnings. This group is a combination of the two groups we previously referred to as transportation controls and mobile equipment controls and components.

The Sola Basic group of companies and our former life safety and building controls group now constitute our new *energy distribution and control* group. This new group contributed \$277 million in sales and \$22.2 million in pretax earnings.

Our smallest product group, *home appliances*, added \$51 million in sales and \$3.6 million in pretax earnings.

All of our product groups contributed to the company's sales and earnings gains. More information on the markets and products of each segment of our

business may be found on page 4. Detailed accounts of the past year's performance for each group and the outlook for 1978 are contained in pages 5 through 18 of this report.

### **Changes in Board of Directors**

In October, we welcomed Frank H. Roby, chairman and president of Sola Basic, to our board of directors. Mr. Roby was also elected a senior vice president and group executive. He brings 45 years of experience in the electrical/electronic business to General Signal.

In March of 1978, Philip R. Fortune, chairman of our executive committee and group executive, retired after 38 years of service. Mr. Fortune came to General Signal in 1967 through the acquisition of the New York Air Brake Company, where he served as president. During his tenure, he contributed much to our market leadership positions in both the environmental and industrial process controls and transportation controls groups.

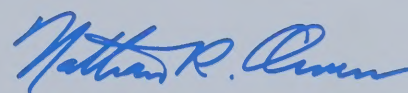
### **Outlook**

We are confident about the company's future. General Signal has a proven record of consistent growth through varied economic climates. Our emphasis on markets of high social priority, coupled with technical and market leadership, has made this possible.

Over the past five years, we have achieved a compound average annual growth rate in earnings per share of

16%, slightly exceeding our corporate benchmark of 15%. At the same time, we have enjoyed rising returns on investment as a result of asset management and cost reduction programs and productivity gains.

We closed 1977 in a strong financial position, with good prospects for our traditional markets and the long-term growth opportunities presented by our entry into new markets within the electric energy field. We are dedicated to maintaining this momentum and we expect 1978 to be another good year for General Signal.



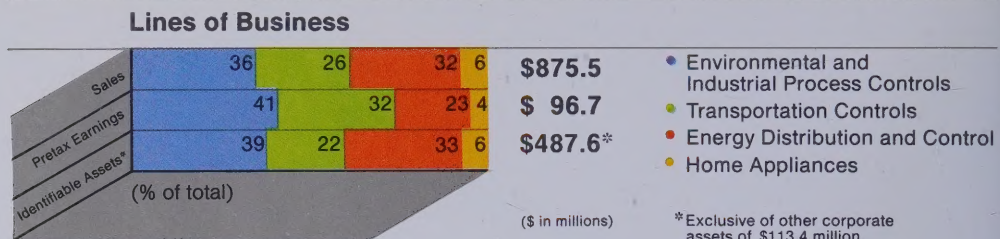
**Nathan R. Owen**  
Chairman



**Harold A. Strickland, Jr.**  
President



# Our Business



General Signal is a leading manufacturer of a broad spectrum of specialty control systems and related equipment, participating in such markets of high social priority as water pollution control, railroads and rail mass transit, life safety, and the distribution, control and use of energy in electric form.

Three product groups, which account for approximately 95% of corporate sales, pretax earnings and assets, serve these markets with products incorporating one or more of the four basic control technologies—electrical, electronic, hydraulic and pneumatic.

## Environmental and Industrial Process Controls Group

The largest of these groups, the environmental and industrial process controls group, had sales of \$319 million, 36% of total sales, and pretax earnings of \$40.1 million, 41% of total pretax earnings. Primary markets served are municipal and industrial water and wastewater treatment, and general industrial and agricultural processing. Products include instrumentation and supervisory control systems, valves and actuators, mechanical mixers, aerators, biological waste treatment systems, centrifugal, wastewater, vertical turbine and high-vacuum pumps, specialty air pollution control equipment, and chemical specialties.

## Transportation Controls Group

The transportation controls group, with sales of \$228 million, 26% of total sales, and pretax earnings of \$30.8 million, 32% of total pretax earnings, provides the nation's railroads and rail mass transit systems with highly engineered systems and controls including cab, wayside and centralized traffic control components and systems, push button interlocking controls, other computerized railroad control systems, and braking control systems and equipment for both freight and passenger cars. In addition, this group supplies the world's airports with radar navigation and identification subsystems and ground weather monitoring systems and provides controls and communication systems for ships. It also serves the heavy-duty, mobile construction, mining, materials handling, agricultural and auto and truck markets with control products such as hydraulic gear pumps, motors, hydrostatic transmissions, advanced fluid power systems, and vehicular steering and suspension components.

## Energy Distribution and Control Group

The energy distribution and control group, which accounts for \$277 million in sales, 32% of overall sales, and pretax earnings of \$22.2 million, or 23% of total pretax earnings, manufactures a diversified range of equipment employed in the distribution, control and use of energy in electric form, as well as systems and controls for life safety and property

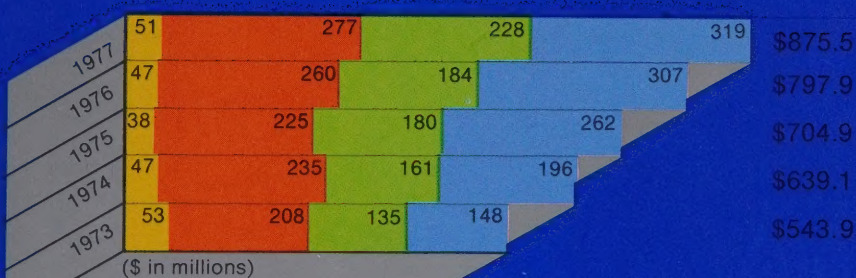
protection. Major markets include the electric and communications utilities, electrical construction, and process industries. Equipment manufactured includes distribution transformers, regulated power supplies, electric heat process equipment, communications equipment, microelectronics production and assembly equipment, power distribution components, fire and smoke detection equipment, time recording and automated parking lot control systems.

Through a fourth product group, home appliances, with \$51 million in sales, 6% of total sales, and pretax earnings of \$3.6 million, or 4% of total pretax earnings, the company is a major producer of floorcare appliances, and is best known for its Regina Elektribroom®, the industry's leading lightweight vacuum cleaner. Electric motors for small appliances are also produced.

The majority of General Signal's business—about 88% of consolidated sales—is conducted within the continental United States. As of December 31, 1977, the company employed 20,000 employees in 25 states and 11 foreign countries. General Signal's common stock is traded on the New York and Pacific Coast stock exchanges, and 13,100 stockholders own approximately 20 million shares of the company's common stock.

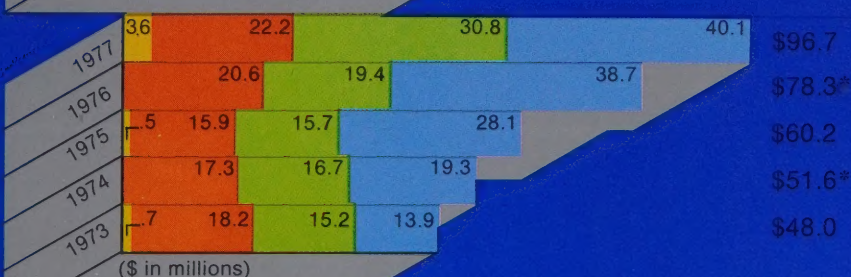


# Product Group Highlights



## Net Sales

- Environmental and Industrial Process Controls
- Transportation Controls
- Energy Distribution and Control
- Home Appliances



## Pretax Earnings

- Environmental and Industrial Process Controls
- Transportation Controls
- Energy Distribution and Control
- Home Appliances

\* Home Appliances reported pretax losses of \$.4 million and \$1.7 million in 1976 and 1974 respectively.



# Environmental and Industrial Process Controls

## Market pause slows group's growth

Sales rose 4% to \$319 million... Pretax profits also rose 4% to new high of \$40.1 million... Pretax return on sales held at all-time high of 12.6% attained last year.

Slower growth in 1977 after strong gains in prior years reflected less buoyant conditions in both wastewater treatment and general industrial process markets.

## Industrial process business should pick up

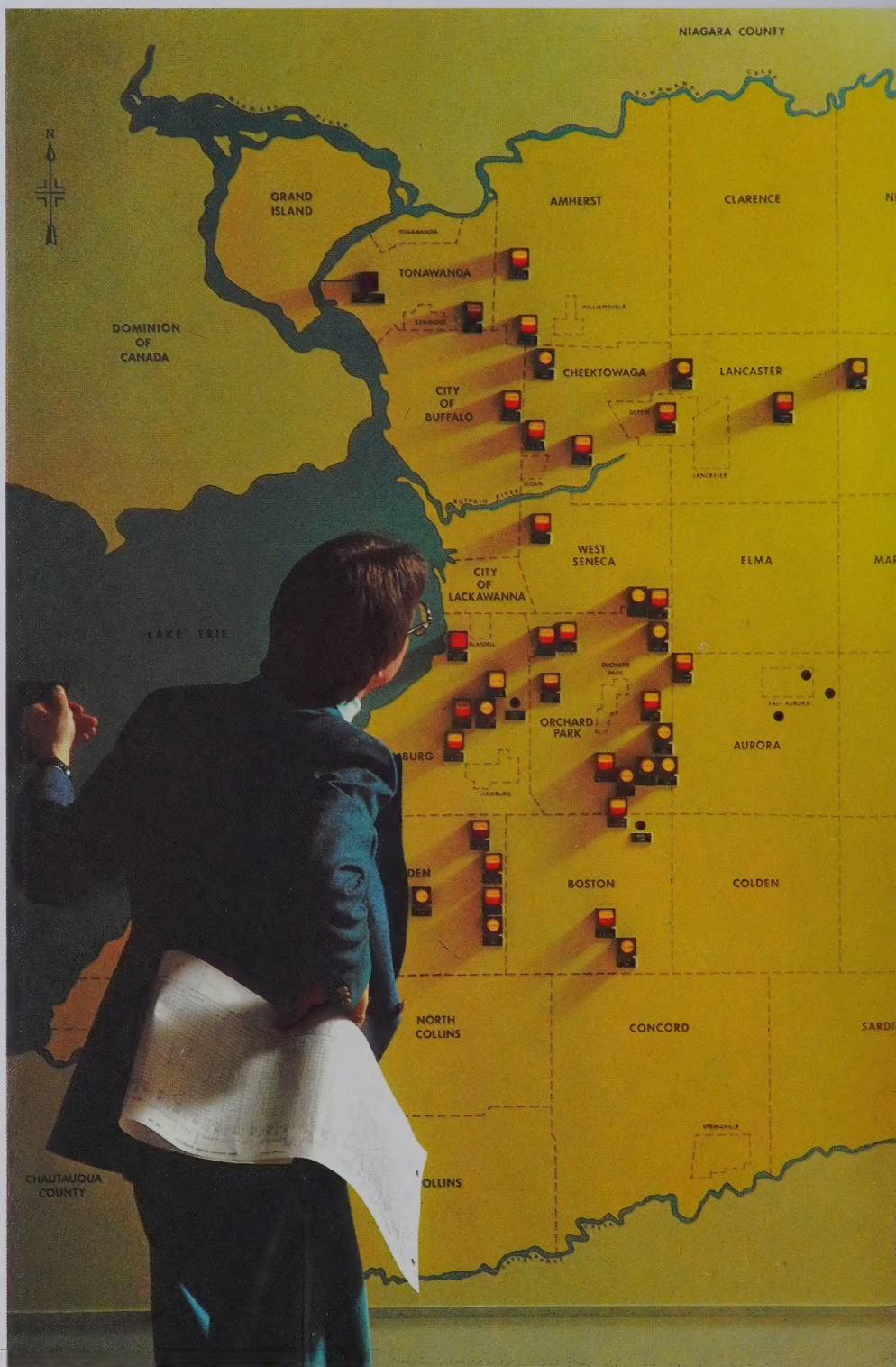
New plant and equipment spending barely exceeded growth in general economy in 1977... Capital expenditures have yet to exhibit strength expected in later stages of business upturn.

Continued strong corporate balance sheets, cash flows and higher plant capacity utilization rates should improve capital spending in 1978 as energy and tax uncertainties are resolved.

Recent appropriation figures indicate business may increase investment in plant and equipment by more than the 11% to 13% forecast by most economists... Purchases of group's products by chemical and other material producers will lag other capital spending near term, but level of quoting activity to this market has been increasing.

## Technology will aid improvement

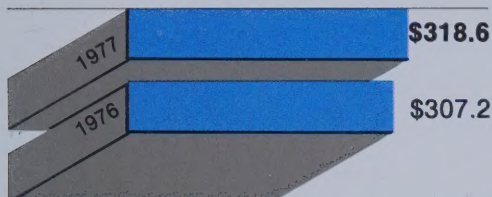
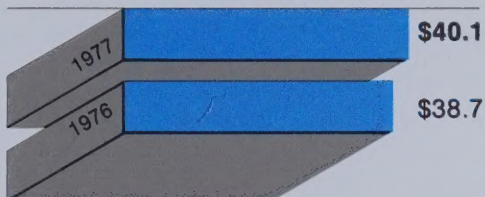
Environmental group's emphasis on advanced technology and engineering expertise has helped keep General Signal in front... New technology applications in 1977 included use of lasers in fluid mixing research...



BIF instrumentation and controls provide a continuous flow of information on operations at the Erie County Water Authority's 24 remote pumping sta-

tions and 31 storage tanks serving an area of 220 square miles around Buffalo, N.Y.



**Sales (in millions)****Pretax Earnings (in millions)**

Engineer tests Aurora Pump's vertical mixed-flow pumps which deliver 4,900 gallons of water per minute from secondary settling tanks at the City

of Hopewell, Va. Regional Wastewater Treatment Plant. Speed of the eight pumping systems is controlled by Aurora Apco-Matic variable-speed con-

trol panels. Also in use at the facility are 16 Lightnin® aerators manufactured by Mixing Equipment.

For air pollution market, unique Ionizing Wet Scrubber met compliance requirements in first four tests... Innovative Lightnin® treatment system aided position in wastewater market, selling 30 systems in Canada and nine in U.S.... System reduces solids, has large capacity for biological shock loads.

Broad technology base gives General Signal strong position in emerging water treatment market stemming from new, strict treatment standards set in national Safe Drinking Water Act enacted in 1977.

#### **Federal funds available to fuel municipal wastewater treatment business**

Environmental Protection Agency grants for wastewater treatment plant construction rose to record \$6.5 billion in fiscal 1977... Represents 33% increase over \$4.9 billion granted in previous year... Construction starts and related equipment orders continue to lag grant program... Backlog of funds to be disbursed by EPA now stands at nearly \$12 billion.

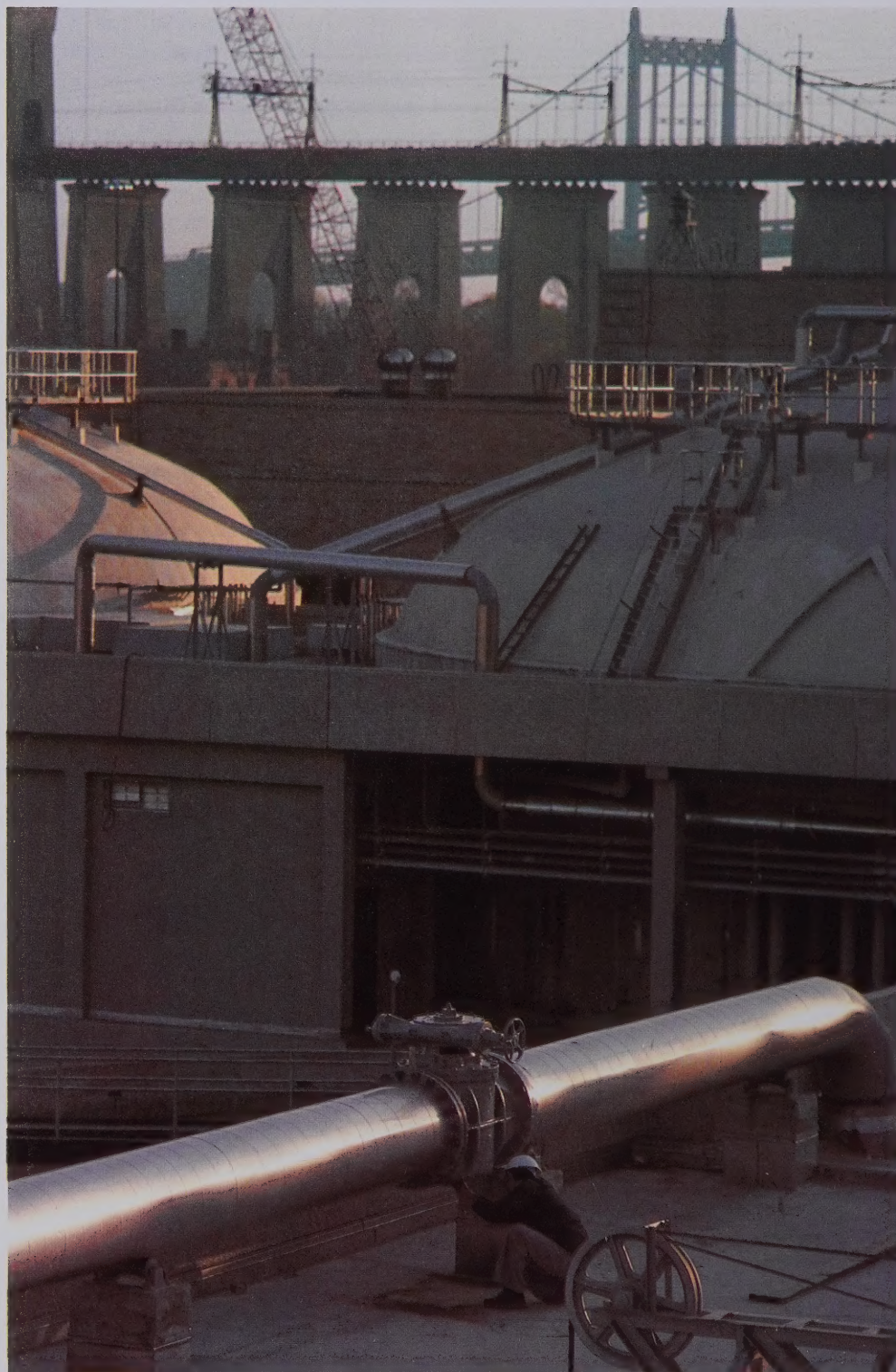
EPA has moved to eliminate many stumbling blocks that hampered 1977 shipments... Staff added... Municipal loan guarantees offered... Regional EPA authorities given more discretion to step up disbursements... Conversion of grants to construction starts will benefit group's wastewater treatment sales.

#### **Public works will help too**

Phase II of Public Works Employment Act is expected to add some \$4 billion to federal funding in 1978 for such projects as sewer systems and water supply facilities, among others.



# Environmental and Industrial Process Controls



DeZurik eccentric plug valve in the foreground is one of several hundred used in this large New York City water pollution control plant, which has

the capacity to handle up to 290 million gallons of wastewater per day. Six 54" knife-gate valves were also built by DeZurik for this facility.

## **Legislation will provide more funds**

Clean Water Act of 1977 has been signed by President Carter and provides additional \$24.5 billion over the next five years for construction of wastewater treatment plants... New law reaffirms dedication to national clean water effort.

## **Strong industrial clean-up commitment**

Under 1977 legislation, pollution deadlines for installation of advanced pollution control equipment by industrial dischargers have been extended one year to 1983... Spending for industrial wastewater treatment rose 17% in 1977 to \$3.5 billion, more than twice amount spent five years ago... Future investment is anticipated to continue at substantial pace as wastewater discharge levels remain a high national priority.

## **Outlook favorable for '78**

Market leadership position, cost reduction programs enhance outlook for shipments and margins.

\$12 billion federal spending backlog, easing government restrictions help expand water and wastewater markets... Public works projects, additional funds provided by new federal legislation aid outlook too.

Industrial wastewater customers continue to commit funds at record levels to meet federal compliance schedules.

Process industry in good financial position for expansion... Increased spending for capital equipment anticipated.





16 of Mixing Equipment Company's Lightning® fixed-base aerators provide oxygen transfer and thorough mixing of effluent in a 13-acre

lagoon at the Consolidated Papers, Inc. Water Quality Center in Wisconsin Rapids, Wisc., which serves three pulp and paper mills.



# Transportation Controls

## Group sales, earnings set records

Sales grew 24% to new high of \$228 million... Pretax earnings rose 59% to record \$30.8 million... Pretax return on sales rose to 13.5% as margins continued to expand from 10.6% last year, 8.7% the year before.

Aiding group results were railroad modernization and rehabilitation programs, hailed as most significant development of 1977 by rail industry... Older, fixed-price contracts phased out of rail mass transit backlogs, boosting profit margins.

## Rail capital spending up, still climbing

Record \$2.9 billion spent by rail industry in 1977 to upgrade service, facilities... 1978 projected outlays of \$3.3 billion could go higher if economy continues expansion.

Rail classification yard projects expected to aid sales of computerized control systems and car retarders... Company will also continue to benefit from capacity expansion projects, including track and signaling work, especially in area of centralized traffic control systems.

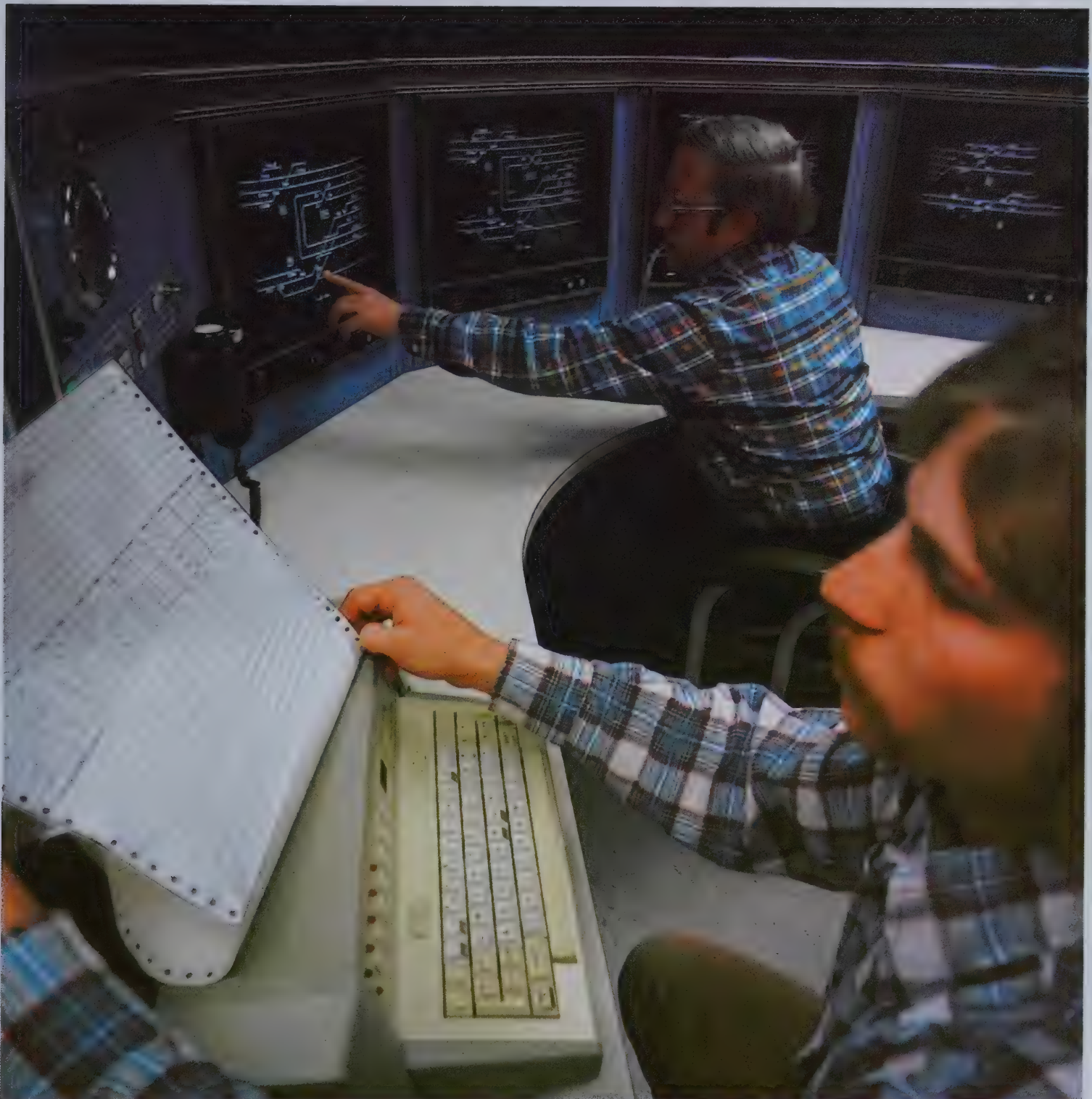
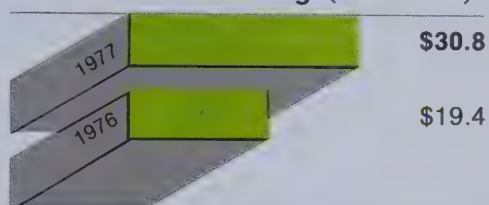
## Rolling stock shipments firm, orders up

Freight car orders rose 76% to 67,000 cars in 1977, from 38,000 in 1976... Industry expects high order levels to continue in 1978... Deliveries kept pace with year-earlier level of over 53,000 cars despite last-quarter strike at one major carbuilder... 1978 deliveries could exceed 60,000.



Dynapower's hydrostatic transmissions power the rock drills used in mining coal at the Masontown, Pa. Power Plant in the background.



**Sales (in millions)****Pretax Earnings (in millions)**

General Railway Signal's Traffic Master® II computer-based, color video control system supervises routing of trains between

any two points and provides operating information at a major steel company's taconite mine.



# Transportation Controls



New York Air Brake's advanced electro-pneumatic/hydraulic brake system serves an emerging market in trolley cars—a mass transit sys-

tem with a future as well as a past. New light rail vehicles being supplied to the Massachusetts Bay Transportation Authority in Boston (pictured above)

and the San Francisco Municipal Railway will use the New York Air Brake system.



In addition, Conrail announced program calling for 25,000 new freight cars in 1978-80 period, aiding outlook for rail car equipment business... Conrail is also strong customer for replacement parts.

### **Federal assistance to mass transit growing**

Government mass transit grants reached \$1.8 billion in fiscal 1977; more than \$2.2 billion expected in fiscal 1978... About 60% of all mass transit funds granted since 1972—some \$4.3 billion—was committed to rail transit systems, primarily subways... Administration's policy now favors use of buses, light rail systems and people movers where more cost effective... Grants expected to continue rising in recognition of mass transit as solution to energy crisis.

Additions to new Washington and Atlanta mass transit systems anticipated... Extensions to lines in Boston and New York and light rail vehicle needs in Boston and San Francisco present additional opportunities... Baltimore expects to release new rail transit system specifications for bidding in late 1978.

New legislation will help... Congress considering highway-public transportation bill providing for \$50

billion over next five years, \$13.3 billion of that for mass transit... In addition, this White House-backed proposal would allow local governments greater flexibility in choosing between mass transit and highway projects, and federal matching grants would be raised to 90% of total project costs from current 80% level.

### **Legislation aids railroad markets**

Improved regulatory climate is favorably impacting rail traffic... 1977 was third-best traffic year in railroad history, with 816 billion ton-miles recorded... Industry productivity gains help strengthen financial position, but not all railroads share in gains.

Railroad Revitalization and Regulatory Reform Act of 1976 provided \$6.4 billion for subsidies to Northeast roads, Conrail and Amtrak... Allows railroads to adjust rates with greater ease, resulting in higher return on investment... Also provides lending assistance for railroad rehabilitation, but has been inadequate so far for weaker railroads.

### **Other markets grow**

Bigger mining, agricultural market sales seen as fluid power applications widen... Construction machinery markets improved in 1977... Company broke ground in Georgia to meet growing demand... Cold forged components sales benefitted in 1977 as domestic auto output topped 10 million cars.

Two late-1977 orders totalling more than \$13 million boost air traffic control equipment outlook... Growing demand indicative of greater attention to life safety factors in Federal Aviation Administration aircraft monitoring and control systems.

### **Strong group performance expected to continue**

Fluid power market firm... Air traffic market strong... Auto business seen leveling off.

Railroad market continues to grow... Increasing capital expenditures for signaling and control systems... Improved freight car orders, reflecting larger coal and grain shipments, aid prospects for braking systems.

Mass transit activity will contribute to group results... Add-ons to existing systems as well as new system starts are in the offing... Favorable legislation expected.

Rail modernization, rehabilitation programs, continued demand from mass transit market produced record 1977 for transportation controls group... Group expected to outperform economy again in 1978, but gains should moderate.



# Energy Distribution and Control

## New group formed to serve energy markets

Former life safety and building protection group combined with related product lines acquired in 1977 for distribution, control and use of energy in electric form... Results of prior years restated to reflect this combination.

Sales record of \$277 million compares with restated \$260 million in 1976, \$225 million in 1975... Pretax earnings at new high of \$22.2 million against restated earnings in 1976 of \$20.6 million and \$15.9 million in 1975... Pretax return on sales remained near 8% level of 1976 but headed up late in period.

## Social priorities strengthen old and new markets

Legislation requiring increased use of detection and communication systems for fire emergencies and increased concern for building security add to market demand.

General Signal's energy group now a major factor in three electrical markets as a result of 1977 acquisition of Sola Basic—industrial electrical processing, electric and communications utilities and electrical construction... These markets seen benefitting from economic expansion, pending national energy policy, position of electricity as most practical and convenient form of power.

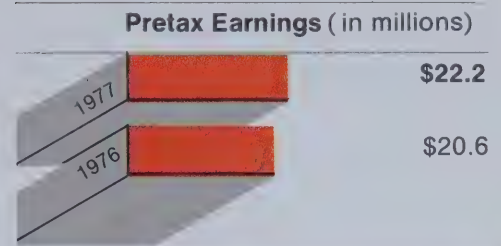
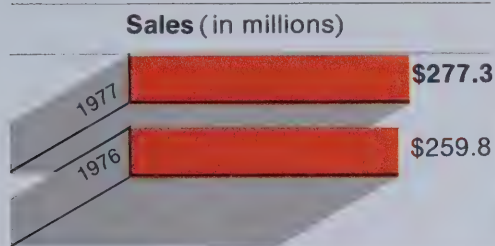
Further market strength expected as United States responds to urgent need to correct international trade deficit...



Sola Electric's Uninterruptible Power Source provides critical protection for the SEPTA subway system in Philadelphia, Pa. The constant electric

energy system insures continuous lighting regardless of brownouts or temporary power failures.





Need to lessen dependence on imported oil will increase consumption of solid fuels such as coal and uranium, which require conversion to electrical form for most uses.

#### New products enhance growth

Larger-capacity and higher-voltage transformers, switches and fuses reduce electrical distribution system losses under heavy load conditions.

Unique transformer remanufacturing service conserves critical materials and reduces utility maintenance costs in central United States.

Uninterruptible and standby power supplies now available to serve critical loads in event of normal power source failure... Regulated power supplies automatically compensate for voltage changes on overloaded power company lines or when power is rationed by voltage reduction.

New electrical insulation, conduit fittings and wiring devices reduce electrical construction costs and enhance safety... High intensity discharge lighting fixtures permit same lighting level at half the energy use of fluorescent lighting.

Wafer dicing saws pioneered to replace diamond scribes and laser beams for dicing semiconductor wafers... Automatic bonders for low cost assembly of microprocessor and other integrated circuits about ready for developing microelectronics market.



Edwards fire alarm, sprinkler monitoring and smoke detection systems protect the Hancock Tower in Boston, Mass.,

and a Cincinnati Time Recorder automatic parking system controls its parking garage.



# Energy Distribution and Control



General Signal's new Lindberg unit manufactured these two electric vacuum furnaces being used in the heat treatment of large components for heavy equipment. Use of

electric furnaces has increased steadily over open-flame heat treatment furnaces as oil and gas supplies dwindle.



Lightweight ceramic fiber insulation, developed to replace conventional firebrick linings in electric heat processing equipment, reduces energy usage by one-third... Users now converting gas and oil-fired equipment to electric in anticipation of shortages.

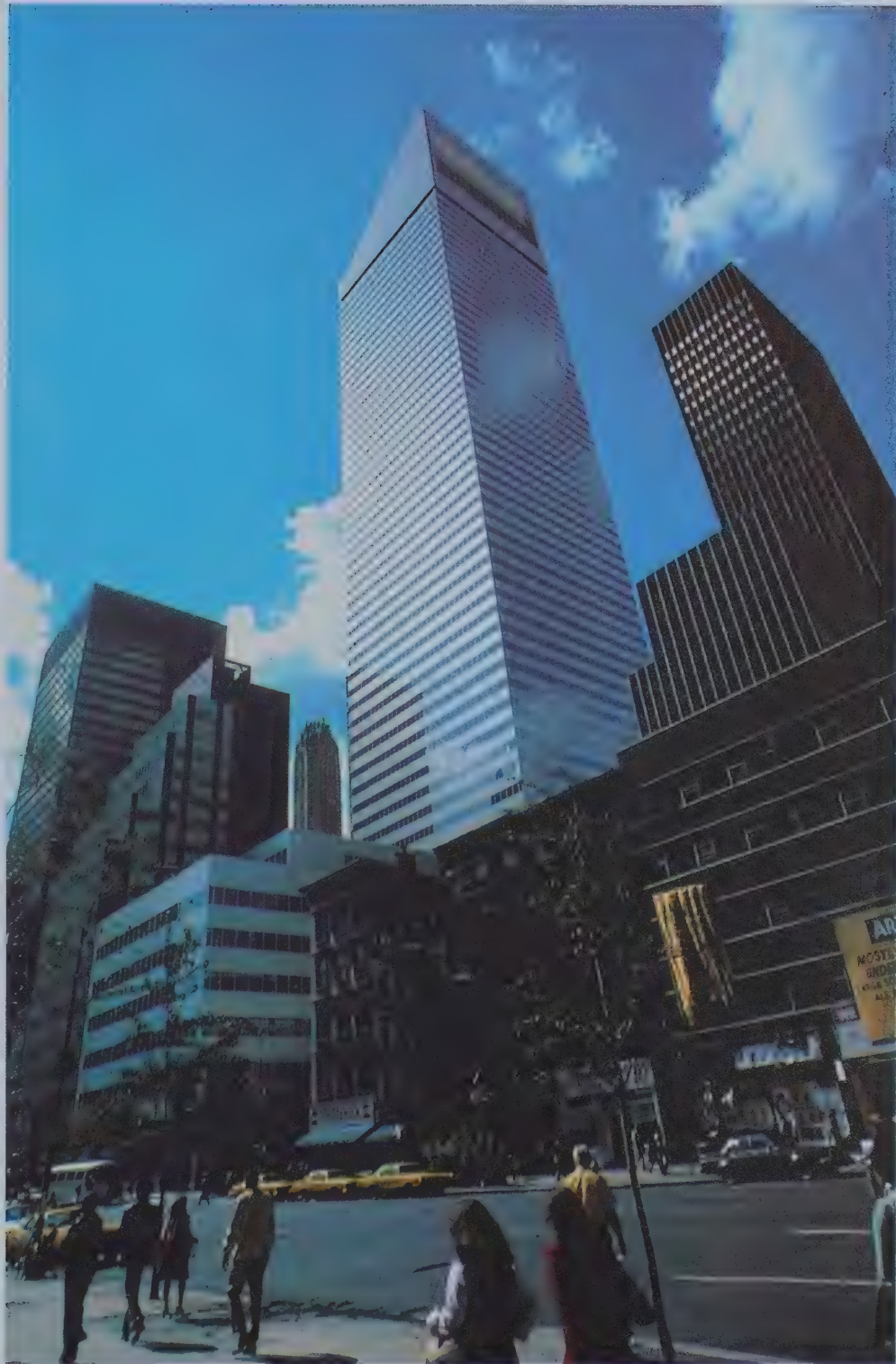
#### **1978 energy group market outlook favorable**

Power company requirements seen rising after prolonged sag... Market for communications equipment expanding, particularly overseas.

McGraw-Hill forecasts 18% gain in commercial and industrial construction... Residential market, of less importance to group, will plateau.

Expanding use of electronic industrial process controls, minicomputers and copiers, coupled with wider voltage swings that accompany operations of utilities at higher percentages of capacity, is increasing demand for regulated and standby power supplies.

Capital spending in energy and energy-related industries seen rising faster than general economy as even larger shares of nation's energy needs are being met electrically.

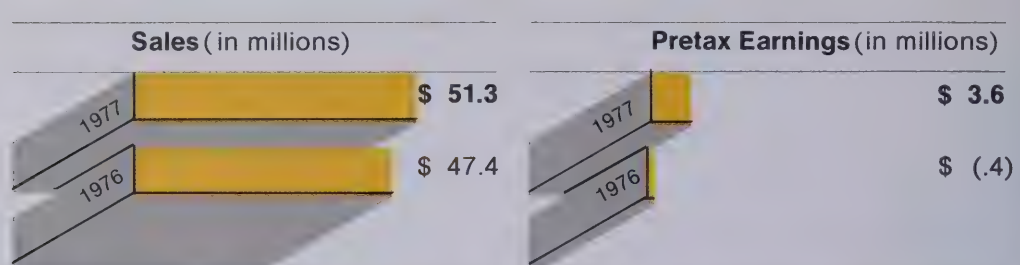


Sola Electric's Solatron® voltage regulators provide 300 KVA of regulated power to each floor of Citicorp Center's 65-story tower in midtown New

York City. This equipment is used in a variety of applications to insure adequate power supply to essential operating equipment.



# Home Appliances



## Increased sales and streamlined operations produce record results

Home appliances group turned in record year in 1977 following several years of erratic performance... A major writeoff in 1974... Recession in U.S. in 1975 and Canada in 1976... Elimination of unprofitable product lines last year.

Continuing businesses produced new sales highs of \$51 million... Pretax earnings rose to record \$3.6 million from pretax loss of \$400,000 in 1976 and were 64% higher than previous all-time high of \$2.2 million in 1972.

Higher sales achieved in response to favorable consumer trends in U.S., but Canadian economy remains weak.

Asset management more effective... Canadian manufacturing operations consolidated... Cost reduction efforts take hold.

## Electrikbroom® paces growth

Electrikbroom® maintained industry leadership position... New Electrikbrush® nozzle introduced... Power-driven brush increases carpet cleaning efficiency... Group results aided by design breakthrough in fractional horsepower motors used for vacuum cleaner power nozzle applications by Regina and outside customers.

## 1978 prospects good

Personal income gains expected to outpace inflation... Market penetration increases as consumers show preference for Regina floorcare products.

Continued market strength and gains in manufacturing productivity should improve 1978 performance.



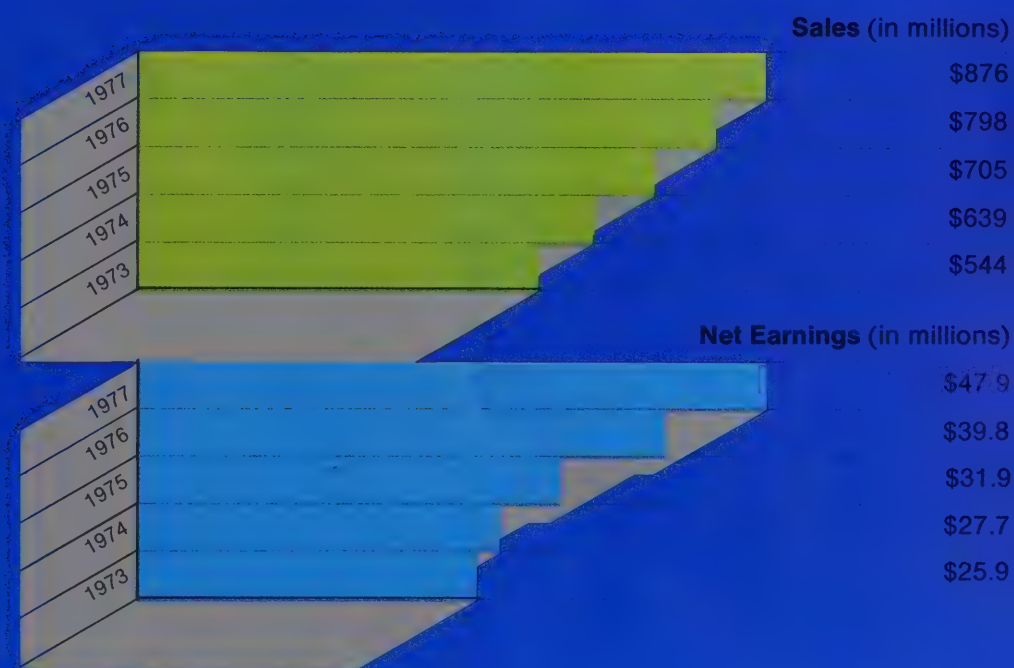
Regina Electrikbroom® is the market-leading light-weight vacuum. One reason—rigorous quality con-

trol checks like this one being conducted by engineers at Regina's laboratory in Rahway, N.J.



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# Management's Discussion and Analysis of the Summary of Operations

## Acquisition

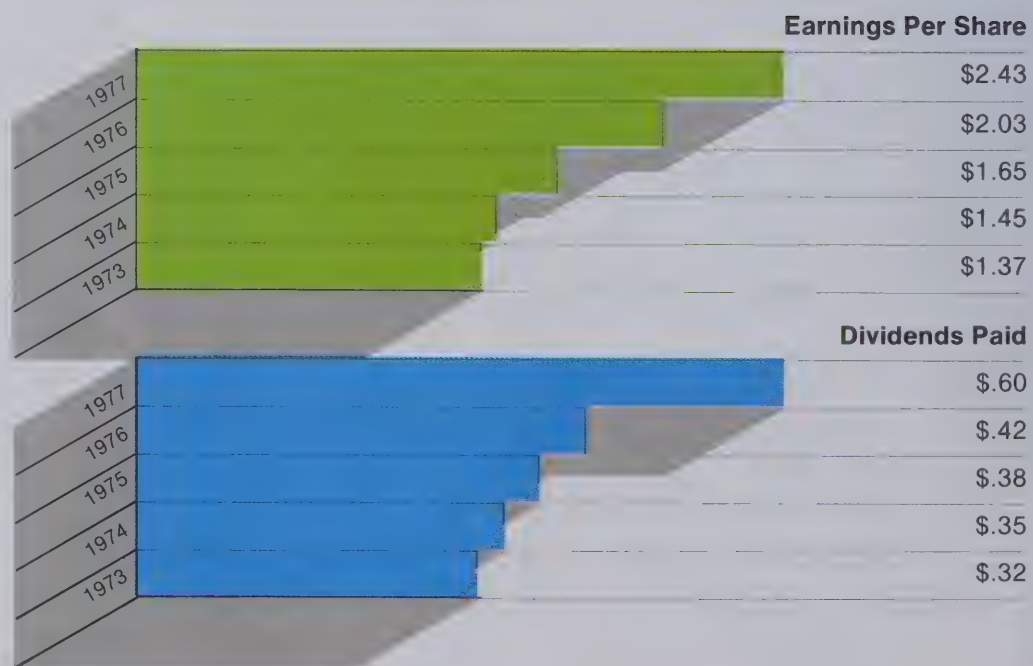
On September 30, 1977, the Company acquired Sola Basic Industries, Inc., a manufacturer of electrical/electronic equipment for the distribution, control and use of energy in electric form.

The acquisition was accounted for on a pooling of interests basis and financials for all prior years have been restated to reflect this, as well as a 100% stock distribution effective July 1, 1977. General Signal issued .70 shares of its common stock for each share of Sola Basic, resulting in the issuance of 3,983,000 shares of stock.

## Net Sales

Sales increased by \$78 million to \$876 million in 1977, a gain of 10%, following a 13% increase in 1976 to \$798 million. All product groups contributed to the sales gain in 1977 with transportation controls accounting for \$45 million of the increase, or 58%. This group's record performance in 1977 came primarily as a result of strong demand from mainline railroad and rail mass transit customers for automated signaling, control, braking and related systems. Of the remaining \$33 million increase, the environmental and industrial process controls group contributed \$11 million, the energy distribution and control group added \$18 million, and home appliances accounted for \$4 million.

The \$93 million sales gain in 1976 over 1975 was benefitted by strong growth in shipments to the pollution control and specific segments of the industrial process and electrical construction markets. Environmental and industrial process controls contributed \$45 million, or 48% of the total gain, and energy distribution and control added \$34 million, or 37%.





### Costs and Expenses

Costs of sales and operating expenses, along with selling, general and administrative expenses, amounted to \$772 million in 1977, \$713 million in 1976 and \$637 million in 1975, representing increases of 8.3% and 11.9%, respectively. As a percent of sales, these expenses declined to 88.2% in 1977, from 89.4% and 90.4% in 1976 and 1975, respectively. These percentage declines in expenses as a percent of sales reflect the impact of effective cost reduction programs and increased manufacturing efficiency at many operating locations.

### Interest Expense

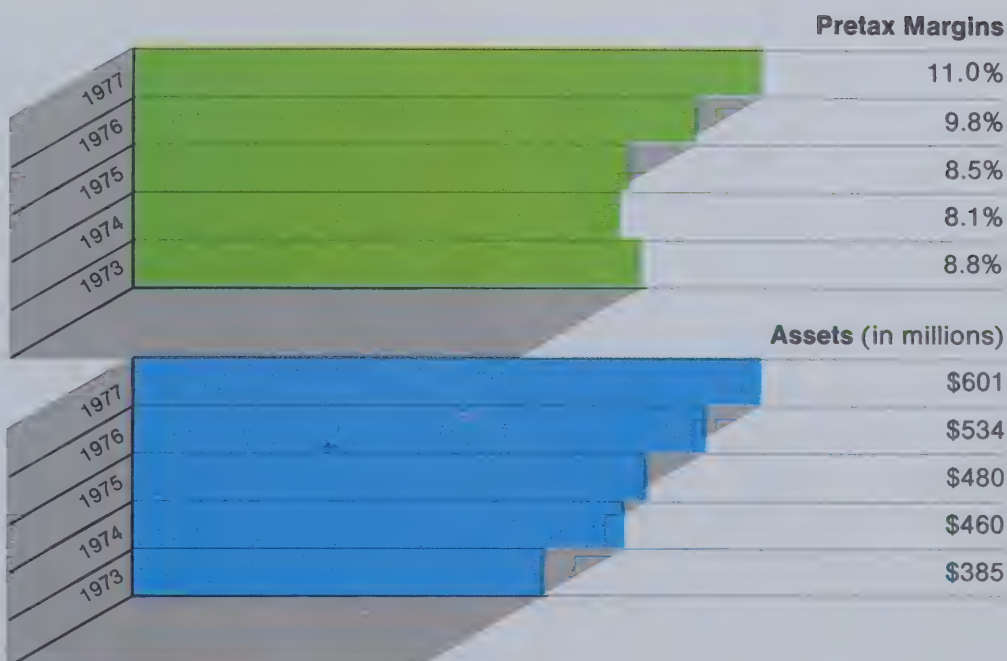
Interest expense in 1977 amounted to \$6.9 million, up from \$6.3 million in 1976. Higher average debt levels, due primarily to foreign borrowings used to finance foreign working capital requirements, partially offset by lower average interest rates, combined to produce this result. In 1976, interest expense declined 14% from \$7.3 million in 1975, primarily as a result of lower borrowing levels.

### Provision for Taxes

The provision for income taxes increased 27% in 1977 and 36% in 1976 because of higher taxable income and a higher effective tax rate. The effective tax rate has risen from 47.1% in 1975 to 50.4% in 1977. A reconciliation of income tax expense to the U.S. statutory rate of 48% for the two most recent years is shown in note 3 to the financial statements.

### Net Earnings

Net earnings increased 20% to \$47.9 million in 1977 following a 25% increase in 1976 to \$39.8 million. Net margins amounted to 5.5% in 1977, up from 5.0% in 1976 and 4.5% in 1975. All product groups contributed to the earnings increase, with the transportation controls group providing the greatest portion of the overall gains.





### Capital Expenditures and Depreciation

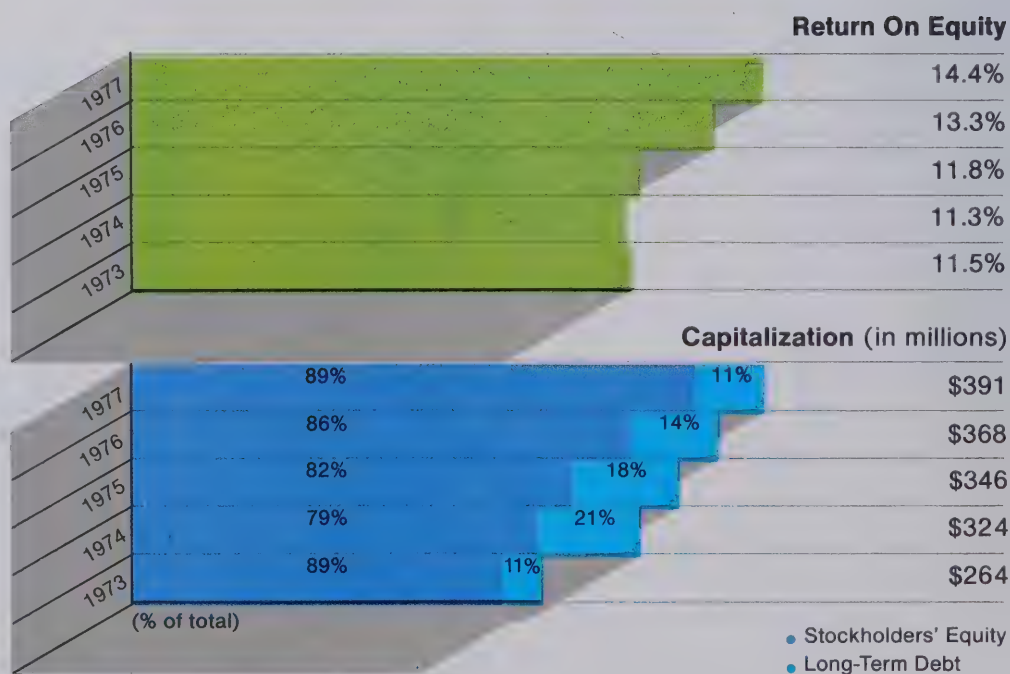
All capital expenditures are carefully screened to insure the highest rate of return at acceptable levels of risk. In each of the past three years, capital expenditures have approximated \$22 million and have been employed primarily in support of the Company's involvement in markets of high social priority. Depreciation expense has risen from \$11.9 million in 1975 to \$13.7 million in 1976 and \$14.6 million in 1977.

### Dividends

Dividends paid per common share increased 43% in 1977 to 60 cents following a 10.5% increase to 42 cents in 1976. On October 20, 1977, the Company's board of directors voted to raise the quarterly dividend 18% to 20 cents, or 80 cents on an annual basis. The new indicated rate for 1978 represents a 33% increase over the 60 cents paid in 1977. Future dividend increases are expected to at least keep pace with the rate of gain in earnings per share.

### Financial Position

General Signal's asset management and cost reduction programs have enabled the Company to maintain a strong financial position in 1977. Working capital rose \$14 million to \$258 million, from \$244 million in 1976. The current ratio at year-end was 2.3 to 1 versus 2.7 to 1 in 1976, and 3.0 to 1 in 1975. Cash and short-term investments amounted to \$86 million, up from \$61 million in 1976 and \$28 million in 1975. Long-term debt of \$42 million in 1977 has declined from 1976 and 1975 levels. Stockholders' equity rose to \$349 million, an increase of \$33 million over 1976, and \$65 million over 1975. Return on average stockholders' equity rose to 14.4% in 1977, from 13.3% in 1976 and 11.8% in 1975.





### Quarterly Data

<b>Earnings</b>	First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
(in thousands)	1977	1976	1977	1976	1977	1976	1977	1976
Net sales	<b>\$213,982</b>	\$195,461	<b>\$221,947</b>	\$203,674	<b>\$218,226</b>	\$188,316	<b>\$221,358</b>	\$204,469
Gross profit	<b>61,913</b>	55,192	<b>65,672</b>	55,936	<b>65,536</b>	54,353	<b>71,593</b>	60,870
Earnings before taxes	<b>20,979</b>	16,098	<b>23,473</b>	18,326	<b>24,202</b>	18,826	<b>28,083</b>	23,404
Net earnings	<b>10,367</b>	8,612	<b>11,662</b>	9,676	<b>11,728</b>	9,819	<b>14,184</b>	11,525
Earnings per share	<b>\$.52</b>	\$.44	<b>\$.59</b>	\$.49	<b>\$.60</b>	\$.50	<b>\$.72</b>	\$.59
Average common shares outstanding	<b>19,705</b>	19,229	<b>19,726</b>	19,604	<b>19,737</b>	19,642	<b>19,745</b>	19,684
<b>Dividends paid</b>	<b>13.0¢</b>	10.5¢	<b>13.0¢</b>	10.5¢	<b>17.0¢</b>	10.5¢	<b>17.0¢</b>	10.5¢
<b>Market price range of common stock</b>	High	Low	High	Low	High	Low	High	Low
<b>1977</b>	<b>\$26<sup>5</sup>/<sub>8</sub></b>	<b>\$25</b>	<b>\$28<sup>3</sup>/<sub>4</sub></b>	<b>\$25<sup>1</sup>/<sub>4</sub></b>	<b>\$28<sup>5</sup>/<sub>8</sub></b>	<b>\$22<sup>3</sup>/<sub>4</sub></b>	<b>\$29<sup>1</sup>/<sub>2</sub></b>	<b>\$23</b>
1976	\$23	\$17 <sup>1</sup> / <sub>8</sub>	\$25	\$19 <sup>3</sup> / <sub>4</sub>	\$28 <sup>1</sup> / <sub>2</sub>	\$24	\$27	\$24 <sup>1</sup> / <sub>2</sub>

Data presented for 1976 include Sola Basic Industries, Inc. on a calendar year basis.

### Product Group Five-Year Review

(in thousands)	1977	1976	1975	1974	1973
<b>Net sales</b>					
Environmental and industrial process controls	<b>\$318,600</b>	\$307,200	\$261,800	\$196,100	\$148,400
Transportation controls	<b>228,300</b>	183,500	179,600	160,900	135,300
Energy distribution and control	<b>277,300</b>	259,800	225,300	235,000	207,700
Home appliances	<b>51,300</b>	47,400	38,200	47,100	52,500
<b>Total</b>	<b>\$875,500</b>	\$797,900	\$704,900	\$639,100	\$543,900
<b>Profits before taxes</b>					
Environmental and industrial process controls	<b>\$ 40,100</b>	\$ 38,700	\$ 28,100	\$ 19,300	\$ 13,900
Transportation controls	<b>30,800</b>	19,400	15,700	16,700	15,200
Energy distribution and control	<b>22,200</b>	20,600	15,900	17,300	18,200
Home appliances	<b>3,600</b>	(400)	500	(1,700)	700
<b>Total</b>	<b>\$ 96,700</b>	\$ 78,300	\$ 60,200	\$ 51,600	\$ 48,000

Operating income by group as required by Financial Accounting Standards Board Statement No. 14 is disclosed in note 10.

Data for all years reflect pooling of interests with Sola Basic Industries, Inc. (see note 2).



# Five-Year Financial Summary

	1977	1976	1975	1974	1973
<b>Operating data</b> (in thousands)					
Net sales	<b>\$875,513</b>	\$797,882	\$704,908	\$639,126	\$543,884
Costs and expenses:					
Cost of sales and operating expenses	<b>610,799</b>	570,888	512,943	467,741	395,071
Selling, general and administrative expenses	<b>161,127</b>	142,400	124,507	111,261	97,175
Interest expense	<b>6,850</b>	6,258	7,288	8,517	3,605
	<b>778,776</b>	719,546	644,738	587,519	495,851
Earnings before income taxes	<b>96,737</b>	78,336	60,170	51,607	48,033
Provision for income taxes	<b>48,796</b>	38,502	28,317	23,939	22,112
Net earnings	<b>\$ 47,941</b>	\$ 39,834	\$ 31,853	\$ 27,668	\$ 25,921
Earnings per average share					
of common stock	<b>\$2.43</b>	\$2.03	\$1.65	\$1.45	\$1.37
Average common shares outstanding	<b>19,728</b>	19,639	19,349	19,169	19,091
Dividends paid	<b>\$.60</b>	\$.42	\$.38	\$.35	\$.32
<b>Balance sheet data</b> (in thousands)					
Working capital	<b>\$258,294</b>	\$244,493	\$227,357	\$211,382	\$160,980
Current ratio	<b>2.3x</b>	2.7x	3.0x	2.7x	2.5x
Net property, plant and equipment	<b>\$131,351</b>	\$125,424	\$118,444	\$106,653	\$ 98,527
Capital expenditures	<b>21,925</b>	22,026	21,532	20,505	21,789
Depreciation and amortization	<b>14,559</b>	13,683	11,927	10,618	9,565
Total assets	<b>600,981</b>	533,965	480,234	459,735	384,585
Long-term debt	<b>42,355</b>	53,000	62,604	68,268	28,585
Stockholders' equity	<b>\$348,534</b>	\$315,465	\$283,398	\$255,647	\$234,954
Return on stockholders' equity	<b>14.4%</b>	13.3%	11.8%	11.3%	11.5%
Book value per share	<b>\$17.65</b>	\$16.02	\$14.53	\$13.33	\$12.28
<b>Other data</b>					
Total employees	<b>20,048</b>	19,556	18,583	18,653	19,761

Note: Amounts shown have been restated to reflect 1977 pooling of interests with Sola Basic Industries, Inc. (see note 2).



# Statement of Earnings

## General Signal Corporation and Consolidated Subsidiaries

	Years Ended December 31,	1977	1976
<b>Net Sales</b>		<b>\$875,513,000</b>	\$797,882,000
<b>Costs and Expenses:</b>			
Cost of sales and operating expenses		<b>610,799,000</b>	570,888,000
Selling, general and administrative expenses		<b>161,127,000</b>	142,400,000
Interest expense		<b>6,850,000</b>	6,258,000
		<b>778,776,000</b>	719,546,000
Earnings before income taxes		<b>96,737,000</b>	78,336,000
Provision for U.S., foreign and state and local income taxes (note 3)		<b>48,796,000</b>	38,502,000
<b>Net Earnings</b>		<b>\$ 47,941,000</b>	\$ 39,834,000
<b>Earnings per Average Share of Common Stock</b>		<b>\$2.43</b>	\$2.03

Data for both years reflect pooling of interests with Sola Basic Industries, Inc. (see notes 1 and 2).



# Balance Sheet

## General Signal Corporation and Consolidated Subsidiaries

<b>Assets</b>	<b>December 31,</b>	<b>1977</b>	<b>1976</b>
<b>Current Assets:</b>			
Cash and certificates of deposit		\$ 75,356,000	\$ 43,672,000
Short-term investments, at cost, which approximates market		10,491,000	17,743,000
Accounts receivable, principally trade and contract, less allowance—1977, \$4,744,000; 1976, \$4,519,000		152,524,000	141,218,000
Inventories:			
Raw materials, purchased parts and work in process		136,653,000	122,783,000
Finished goods		72,213,000	62,180,000
		208,866,000	184,963,000
Prepaid expenses		3,530,000	2,276,000
<b>Total Current Assets</b>		<b>450,767,000</b>	<b>389,872,000</b>
<b>Property, Plant and Equipment, at cost:</b>			
Land		6,986,000	6,393,000
Buildings and leasehold improvements		74,159,000	69,959,000
Machinery and equipment		148,347,000	140,727,000
		229,492,000	217,079,000
Less accumulated depreciation and amortization		98,141,000	91,655,000
<b>Net Property, Plant and Equipment</b>		<b>131,351,000</b>	<b>125,424,000</b>
<b>Investments and Other Assets</b>		<b>18,863,000</b>	<b>18,669,000</b>
		<b>\$600,981,000</b>	<b>\$533,965,000</b>

Data for both years reflect pooling of interests with Sola Basic Industries, Inc. (see notes 1 and 2).



<b>Liabilities and Stockholders' Equity</b>	<b>December 31,</b>	<b>1977</b>	<b>1976</b>
<b>Current Liabilities:</b>			
Notes payable (note 4)		\$ 34,120,000	\$ 12,727,000
Accounts payable		49,371,000	43,074,000
Accrued expenses		87,297,000	69,625,000
Income taxes (note 3)		21,685,000	19,953,000
<b>Total Current Liabilities</b>		<b>192,473,000</b>	<b>145,379,000</b>
<b>Long-Term Debt</b> (note 4)		<b>42,355,000</b>	<b>53,000,000</b>
<b>Other Non-Current Liabilities</b> (note 3)		<b>17,619,000</b>	<b>20,121,000</b>
<b>Total Liabilities</b>		<b>252,447,000</b>	<b>218,500,000</b>
<b>Stockholders' Equity</b> (notes 5 and 6):			
Cumulative preferred stock, par value \$5.00 per share			
Authorized 2,000,000 shares		—	—
Common stock:			
Authorized 50,000,000 shares; issued 19,791,000 in 1977 and			
19,737,000 in 1976, at stated value		30,901,000	30,847,000
Additional paid-in capital		63,048,000	62,181,000
Retained earnings		254,837,000	222,636,000
		<b>348,786,000</b>	<b>315,664,000</b>
Less common stock in treasury; 45,000 in 1977 and 43,000 in			
1976, at cost		252,000	199,000
<b>Total Stockholders' Equity</b>		<b>348,534,000</b>	<b>315,465,000</b>
		<b>\$600,981,000</b>	<b>\$533,965,000</b>

Data for both years reflect pooling of interests with Sola Basic Industries, Inc. (see notes 1 and 2).



# Statement of Stockholders' Equity

## General Signal Corporation and Consolidated Subsidiaries

Years Ended December 31, 1977 and 1976

	Common Stock	Additional Paid-In Capital	Retained Earnings	Common Stock in Treasury
Balance at December 31, 1975, as previously reported	\$18,949,000	\$44,985,000	\$143,786,000	\$(346,000)
Effect of 100 percent stock distribution reflecting transactions prior to payment date (note 5)	7,838,000	(7,838,000)		
Effect of pooling of interests with Sola Basic Industries, Inc., reflecting transactions prior to merger date (note 2)	3,892,000	23,080,000	49,052,000	
Balance at December 31, 1975, as restated	\$30,679,000	\$60,227,000	\$192,838,000	\$(346,000)
Net earnings			39,834,000	
Dividends declared			(10,036,000)	
Exercise of stock options (note 6)	126,000	702,000		
Issuance of common stock to Savings and Stock Ownership Trust (note 7)	42,000	1,162,000		46,000
Transactions in treasury stock (notes 2 and 5)		90,000		101,000
Balance at December 31, 1976	\$30,847,000	\$62,181,000	\$222,636,000	\$(199,000)
Effect of conforming fiscal year of Sola Basic Industries, Inc. to that of General Signal Corporation (note 2)	(29,000)	(745,000)	(1,867,000)	(60,000)
Net earnings			47,941,000	
Dividends declared			(13,873,000)	
Exercise of stock options (note 6)	45,000	662,000		
Issuance of common stock to Savings and Stock Ownership Trust (note 7)	38,000	950,000		
Transactions in treasury stock (note 5)				7,000
Balance at December 31, 1977	<b>\$30,901,000</b>	<b>\$63,048,000</b>	<b>\$254,837,000</b>	<b>\$(252,000)</b>

Data for both years reflect pooling of interests with Sola Basic Industries, Inc. (see notes 1 and 2).



# Statement of Changes in Financial Position

## General Signal Corporation and Consolidated Subsidiaries

	Years Ended December 31,	1977	1976
<b>Resources Provided:</b>			
Resources provided from operations:			
Net earnings		\$ 47,941,000	\$39,834,000
Add items not causing inflow or outlay of current period working capital, principally depreciation and amortization (note 1)		14,797,000	15,383,000
Total resources provided from operations		62,738,000	55,217,000
Sale and retirement of property, plant and equipment		1,196,000	1,486,000
Issuance of common stock to Savings and Stock Ownership Trust (note 7)		988,000	1,250,000
Total resources provided		\$ 64,922,000	\$57,953,000
<b>Resources Applied:</b>			
Additions to property, plant and equipment		\$ 21,925,000	\$22,026,000
Retirement and reclassification of long-term debt (note 4)		10,720,000	9,604,000
Dividends declared		13,873,000	10,036,000
Decrease in other non-current liabilities		4,102,000	704,000
Other-increase (decrease)		501,000	(1,553,000)
Net increase in working capital		13,801,000	17,136,000
Total resources applied		\$ 64,922,000	\$57,953,000
<b>Changes in Working Capital:</b>			
Increase (decrease) in current assets:			
Cash and certificates of deposit		\$ 33,315,000	\$24,512,000
Short-term investments		(8,107,000)	8,568,000
Accounts receivable		18,330,000	13,935,000
Inventories		25,763,000	1,053,000
Prepaid expenses		598,000	(335,000)
		69,899,000	47,733,000
Decrease (increase) in current liabilities:			
Notes payable		(20,529,000)	(5,327,000)
Accounts payable		(8,121,000)	(4,228,000)
Accrued expenses		(22,618,000)	(16,288,000)
Income taxes		(2,300,000)	(4,754,000)
		(53,568,000)	(30,597,000)
Increase in working capital		16,331,000	17,136,000
Effect on working capital of conforming fiscal year of Sola Basic Industries, Inc. to that of General Signal Corporation (note 2)		(2,530,000)	—
Net increase in working capital		\$13,801,000	\$17,136,000

Data for both years reflect pooling of interests with Sola Basic Industries, Inc. (see notes 1 and 2).



# Notes to Financial Statements

## General Signal Corporation and Consolidated Subsidiaries

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### Years Ended December 31, 1977 and 1976

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#### 1. Summary of Significant Accounting Policies and Related Matters

**Consolidation:** The financial statements include the accounts of the Company and its foreign and domestic subsidiaries. Investments in certain minor foreign subsidiaries, as well as 50-percent-or-less owned companies, are stated at cost plus equity in undistributed earnings since acquisition.

The accompanying 1976 financial statements have been restated to reflect the 100 percent stock distribution (note 5), and the merger with Sola Basic Industries, Inc. as a pooling of interests (note 2).

Net assets outside the United States (including non-consolidated subsidiaries) comprise approximately 9 percent of the total in 1977 and 10 percent of the total in 1976 and are located principally in Canada. Net sales were \$102,779,000 in 1977 and \$102,445,000 in 1976. Net earnings amounted to \$2,679,000 in 1977 and \$4,031,000 in 1976.

Exchange gains and losses were immaterial in both 1977 and 1976.

All significant intercompany transactions have been eliminated.

**Inventories:** Inventories are stated at the lower of cost or market. The majority of inventories are based upon standard costs which approximate average costs.

**Depreciation and Amortization:** The Company and its subsidiaries provide for depreciation of plant and equipment using the straight-line method over the estimated useful lives of the assets. Amortization of leasehold improvements is provided on the straight-line method over the lives of the leases or the estimated useful lives, whichever is less. Depreciation and amortization charged to operations amounted to \$14,559,000 in 1977 and \$13,683,000 in 1976.

**Maintenance and Repairs:** Costs of maintenance and repairs are charged to operations. Costs of renewals and betterments, where significant in amount, are capitalized and deductions are made for retirements resulting from the renewals or betterments. Any gain or loss on the sale or disposition of such assets is credited or charged to earnings.

**Research and Development:** Research and development expenditures are charged to operations as incurred and amounted to \$24,493,000 in 1977 and \$24,136,000 in 1976.

**Earnings per Share:** Earnings per share of common stock are calculated by dividing net earnings by the weighted average number of common shares outstanding (19,728,000 shares in 1977 and 19,639,000 shares in 1976).

The Company's weighted average number of common shares has been retroactively adjusted to give effect to the 100 percent stock distribution paid on July 1, 1977 (note 5) and the issuance of .70 shares of the Company's common stock for each share of common stock of Sola Basic Industries, Inc. (note 2).

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#### 2. Acquisitions

A merger with Sola Basic Industries, Inc. ("Sola") was consummated as of September 30, 1977, whereby Sola became a subsidiary of the Company through the exchange of 3,982,854 shares of the Company's \$1 par value common stock for all of the outstanding common shares of Sola. Sola is principally engaged in a single line of business which embraces the design, manufacture and sale of a broadly diversified range of equipment employed in the distribution, control and use of energy in electric form. Prior to the merger, the fiscal year of Sola ended on March 31. The merger was

accounted for as a pooling of interests and accordingly, the accompanying 1976 financial statements include the accounts of Sola as of and for its fiscal year ended March 31, 1977. For the accompanying 1977 financial statements, the fiscal year of Sola has been conformed to that of the Company.

Net sales and net earnings of the Company and Sola for the years ended December 31, 1977 and 1976 are as follows:

	1977	1976
Net Sales:		
General Signal Corporation	\$682,411,000	\$616,644,000
Sola	193,102,000	181,238,000
	<b>\$875,513,000</b>	<b>\$797,882,000</b>
Net Earnings:		
General Signal Corporation	\$ 39,061,000	\$ 31,332,000
Sola	8,880,000	8,502,000
	<b>\$ 47,941,000</b>	<b>\$ 39,834,000</b>

In September 1976, the Company acquired Mission Coatings, Incorporated, a manufacturer of specialty chemical coatings, for 25,264 shares (note 5) of the Company's common stock. The acquisition was accounted for as a pooling of interests.

### 3. Income Taxes

The Company has provided for income taxes as follows:

	1977	1976
Current:		
Federal	\$38,304,000	\$27,227,000
Foreign	3,877,000	2,861,000
State and local	6,726,000	4,837,000
	<b>48,907,000</b>	<b>34,925,000</b>
Deferred:		
Federal and foreign	(97,000)	3,173,000
State and local	(14,000)	404,000
	<b>(111,000)</b>	<b>3,577,000</b>
Total Taxes	<b>\$48,796,000</b>	<b>\$38,502,000</b>

A reconciliation of income tax expense to the U.S. statutory rate of 48 percent follows:

	1977	1976
United States income tax at statutory rate	\$46,434,000	\$37,601,000
State and local taxes, net of federal benefit	3,490,000	2,725,000
All other items, none of which exceeded 5 percent of computed tax	(1,128,000)	(1,824,000)
Total Taxes	<b>\$48,796,000</b>	<b>\$38,502,000</b>

Investment tax credits are accounted for by the flow-through method for both financial and income tax purposes.

Undistributed earnings of certain consolidated and non-consolidated affiliates are not expected to be paid to the Company as dividends, since future investment requirements are in excess of these earnings. However, if such earnings were remitted, the applicable income taxes payable would not be significant.

Deferred income taxes result primarily from the use of different methods for financial and tax purposes in recording depreciation, long-term construction contract revenues and deferred compensation.

Current and non-current deferred tax liabilities (benefits) amounted to \$(1,049,000) and \$8,365,000 at December 31, 1977, and \$3,582,000 and \$7,015,000 at December 31, 1976.



#### 4. Long-Term Debt and Notes Payable

The Company has outstanding \$40,000,000 of Sinking Fund Debentures maturing in 1999 and accruing interest at 8.875 percent per annum. An annual mandatory sinking fund of \$2,700,000 begins in 1985. The Debentures are redeemable at any time at the option of the Company; however, no redemption may be made prior to May 1, 1984, using monies borrowed at less than 8.875 percent interest cost per annum. The Debentures are callable at prices ranging from 107.54 percent of the principal amount in 1978 to 100.44 percent in 1993 and 100 percent thereafter.

The weighted average interest rate for short-term debt outstanding during the year was 9.0 percent in 1977 and 10.5 percent in 1976.

#### 5. Capital Stock

**Common Stock:** On April 21, 1969, the par value of the Company's common stock was changed from \$6.67 to \$1.00. The common shares outstanding (1,959,559) at April 18, 1969, are carried at a stated value of \$6.67 per share, aggregating \$13,070,259, while shares issued subsequent to that date are carried at the par value of \$1.00 per share. On July 28, 1977, the stockholders approved an increase in the number of authorized common shares of the Company from 20,000,000 to 50,000,000.

On July 1, 1977, 7,897,865 common shares were issued in connection with the Company's 100 percent stock distribution (see notes 1 and 2).

**Treasury Stock:** Stock transactions during 1977 and 1976 are as follows:

	1977	1976
Balance at beginning of year, as previously reported	21,632	40,054
Effect of 100 percent stock distribution	21,632	40,054
Balance at beginning of year, as restated	43,264	80,108
Treasury stock acquired	2,412	—
Common stock issued for acquired company (note 2)	—	(25,264)
Common stock issued to the Company's Savings and Stock Ownership Trust	—	(11,168)
Common stock issued under the Company's Incentive Compensation Plan	(418)	(412)
Balance at end of year	45,258	43,264

#### 6. Stock Option Plan

Under a stock option plan approved by stockholders on April 16, 1971, and amended on April 18, 1975, options may be granted to key employees to purchase a maximum of 720,000 shares of the Company's common stock. Options granted under this plan may include options which can be exercised, in whole or in part, either as qualified or as nonqualified options, at the determination of the participant. Qualified options are exercisable over a five-year period from date of grant, and nonqualified options are exercisable over a ten-year period. The option price for the shares covered by each option is the fair market value on the date such option is granted.

There were 4,990 shares reserved for stock options which were assumed by the Company upon acquisition of Mixing Equipment Co., Inc., all of which were exercised during 1976.

An additional 43,495 shares of common stock were reserved in connection with the acquisition of Sola Basic Industries, Inc., of which 1,950 shares were exercised subsequent to consummation of the merger (note 2).

At December 31, 1977, 659,302 shares of common stock were reserved for issuance under the 1971 Plan.

The following table summarizes the plan for 1977 and 1976:

	1977	1976
Shares under option at January 1, At prices ranging from \$6.19 to \$27.83	405,947	443,525
Options granted:		
At \$25.70	17,200	
At \$24.15	157,800	
At \$6.19 and \$22.50		119,075
Options exercised:		
At prices ranging from \$6.19 to \$24.13	38,087	
At prices ranging from \$6.19 to \$21.20		117,590
Options terminated	3,413	39,063
Shares under option at December 31, At prices ranging from \$6.19 to \$27.83	539,447	405,947
Shares exercisable at December 31, At prices ranging from \$6.19 to \$27.83	279,573	225,725

## 7. Employee Benefit Plans

The Company and its subsidiaries have in effect a number of pension plans for salaried and hourly-paid employees. Costs of the plans charged to operations, including amortization of the past service costs over a period not exceeding 30 years, amounted to \$8,260,000 in 1977 and \$7,986,000 in 1976. The Company's policy is to fund accrued pension costs.

The effect of the Employee Retirement Income Security Act of 1974, along with other plan amendments and a change in actuarial assumptions, effective January 1, 1976, is not significant to the Company's pension costs, funding of pension costs or unfunded vested benefits.

The actuarially-computed value of vested benefits for all plans exceeded the total of balance sheet accruals and the market value of pension fund assets at the most recent valuation date by approximately \$7,600,000.

Effective January 1, 1976, the Company established a Savings and Stock Ownership Plan for certain eligible employees. Under the plan, the Company makes regular monthly contributions equal to a fixed percentage of certain defined amounts contributed by employees. Company contributions amounting to \$1,563,555 in 1977 were invested in shares of the Company's common stock. At December 31, 1977, there were 259,769 shares of common stock reserved for issuance under the plan.

## 8. Incentive Compensation Plan

The Company's incentive compensation plan provides for awards to officers and key employees in cash, common stock of the Company, or both. Payment of such awards may be made currently or deferred. The stockholder-approved plan limits the total amount which can be provided in any one year to ten percent of the amount by which net earnings (as defined in the plan) exceed five percent of average capital investment (as defined in the plan) during the year. At December 31, 1977, a total of 37,332 shares of common stock were reserved for issuance as deferred compensation.



**9. Contingent Liabilities**

The Company and its subsidiaries are defendants in various legal proceedings, the ultimate liability in respect of which cannot be determined at this time. The Company is of the opinion that such liability, to the extent not provided for through insurance or otherwise, will not have a material effect upon the Company's financial position.

**10. Net Sales, Operating Income and Identifiable Assets by Product Group\***

(in thousands)	1977	1976	1975	1974	1973
<b>Net sales:</b>					
Environmental and industrial process controls	\$318,572	\$306,840	\$261,820	\$196,089	\$148,388
Transportation controls	228,280	183,924	179,563	160,896	135,255
Energy distribution and control	277,279	259,756	225,310	235,017	207,698
Home appliances	51,382	47,362	38,215	47,124	52,543
Total	\$875,513	\$797,882	\$704,908	\$639,126	\$543,884
<b>Operating income (loss):</b>					
Environmental and industrial process controls	\$ 47,452	\$ 44,853	\$ 34,485	\$ 24,107	\$ 16,006
Transportation controls	33,301	22,443	18,794	19,490	17,072
Energy distribution and control	28,740	27,124	21,285	23,548	23,673
Home appliances	4,592	967	1,126	(104)	1,412
Total	\$114,085	\$ 95,387	\$ 75,690	\$ 67,041	\$ 58,163
Equity income	1,241	519	286	1,109	1,422
Interest expense	(6,850)	(6,258)	(7,288)	(8,517)	(3,605)
Corporate expenses	(11,739)	(11,312)	(8,518)	(8,026)	(7,947)
Earnings before income taxes	\$ 96,737	\$ 78,336	\$ 60,170	\$ 51,607	\$ 48,033
<b>Identifiable assets:</b>					
Environmental and industrial process controls	\$188,046	\$170,905	\$167,871	\$153,197	
Transportation controls	106,437	97,966	96,314	93,909	**
Energy distribution and control	161,397	151,395	136,632	139,633	
Home appliances	31,748	31,010	31,548	35,917	
Total	\$487,628	\$451,276	\$432,365	\$422,656	
General corporate assets	102,270	73,133	37,111	25,972	**
Investment in affiliates	11,083	9,556	10,758	11,107	
Total assets	\$600,981	\$533,965	\$480,234	\$459,735	\$384,585
<b>Depreciation and amortization:</b>					
Environmental and industrial process controls	\$ 5,375	\$ 4,590	\$ 3,664	\$ 3,035	\$ 2,657
Transportation controls	3,350	3,332	3,025	2,792	2,636
Energy distribution and control	3,964	3,919	3,652	3,230	2,938
Home appliances	1,556	1,566	1,421	1,413	1,195
<b>Capital expenditures:</b>					
Environmental and industrial process controls	\$ 9,960	\$ 9,830	\$ 10,791	\$ 7,433	\$ 10,802
Transportation controls	4,106	4,440	4,723	3,506	3,167
Energy distribution and control	6,355	5,725	4,773	7,336	3,746
Home appliances	1,496	1,152	1,166	2,204	4,068
<b>Equity in affiliates:</b>					
Equity income	\$ 1,241	\$ 519	\$ 286	\$ 1,109	\$ 1,422
Investment in affiliates	11,083	9,556	10,758	11,107	**

\*Adjusted to segregate corporate expenses, interest expense and equity income in accordance with Financial Accounting Standards Board Statement No.14.

\*\*Details not available.

**Unaudited Notes to Financial  
Statements**

**A. Replacement Cost**

The cumulative impact of inflation over a number of years has resulted in higher costs for replacement of existing plant and equipment; however, these increased costs have partially been offset by technological and design improvements which result in increasing the productivity of the newer asset additions.

The Company has historically been able to offset cost increases by increasing sales prices in an amount sufficient to maintain relatively constant gross profit percentages on sales.

Additional replacement cost information is available in the Company's Annual Report on Form 10-K (a copy of which is available upon request).

**B. Operations by Quarter for 1977 (Unaudited)**

Reference is made to Quarterly Data, appearing on page 23 of this annual report, for additional information concerning operations by quarter for 1977 and 1976.

**Report of Independent  
Certified Public Accountants**

**Peat, Marwick, Mitchell & Co.**

Certified Public Accountants

345 Park Avenue, New York, N.Y. 10022

The Board of Directors and Stockholders  
General Signal Corporation:

We have examined the balance sheet of General Signal Corporation and consolidated subsidiaries as of December 31, 1977 and 1976, and the related statements of earnings, stockholders' equity and changes in financial position for the years then ended. Our examinations were made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The financial statements as of and for the year ended December 31, 1976, have been restated to reflect the pooling of interests with Sola Basic Industries, Inc. described in note 2 of the Notes to Financial Statements. For 1976 we did not examine the consolidated financial statements of Sola Basic Industries, Inc. and consolidated subsidiaries, which statements reflect total assets and net sales each constituting 23 percent of the related 1976 consolidated totals. These statements were examined by other auditors whose report thereon has been furnished to us, and our opinion for 1976 expressed herein, insofar as it relates to the amounts included for Sola Basic Industries, Inc. and consolidated subsidiaries, is based solely upon the report of the other auditors.

In our opinion, based upon our examinations and in 1976 the report of other auditors, the aforementioned financial statements present fairly the financial position of General Signal Corporation and consolidated subsidiaries at December 31, 1977 and 1976, and the results of their operations and the changes in their financial position for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

*Peat, Marwick, Mitchell & Co.*

February 6, 1978



# United States and Canadian Operating Units

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## Environmental and Industrial Process Controls

**Aurora Pump** Aurora, Ill., Los Angeles, Calif. and Toronto, Ont.  
**BIF** West Warwick, R.I., Largo, Fla. and Toronto, Ont.  
**Ceilecote** Berea and Mantua, Ohio, Houston, Tex., and Mississauga, Ont.  
**DeZurik** Sartell, Minn., La Grange, Ga., McMinnville, Tenn.,  
 Rochester, N.Y. and Cambridge, Ont.  
**Greedy Mixing Equipment Limited** Toronto, Ont.  
**Kinney Vacuum** Boston, Mass.  
**Marsh Instrument** Skokie, Ill., Houston, Tex., Edmonton,  
 Alberta and Rexdale, Ont.  
**Mixing Equipment** Rochester and Avon, N.Y. and Wytheville, Va.  
**Perolin and Perolin-Bird Archer Ltd.** Wilton, Conn., Chicago, Ill.,  
 Atlanta, Ga. and Cobourg, Ont.

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## Transportation Controls

**Axel Electronics** Jamaica, N.Y.  
**Cardion Electronics** Woodbury, N.Y.  
**Dynapower, Stratopower** Watertown, N.Y.  
**General Railway Signal** Rochester, N.Y.  
**Henschel** Amesbury, Mass.  
**Hydreco** Kalamazoo and Sterling Heights, Mich.  
**Metal Forge** Columbus, Stryker and Deshler, Ohio  
**New York Air Brake** Watertown, N.Y.

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## Energy Distribution and Control

**Anchor Electric** Manchester, N.H.  
**Bishop Electric** Cedar Grove, N.J.  
**Cincinnati Time Recorder** Cincinnati, Ohio  
**Dielectric Communications** Raymond, Me.  
**Dowzer Electric** Mt. Vernon, Ill. and San Juan, P.R.  
**Edwards** Norwalk, Conn. and Pittsfield, Me.  
**Edwards/Canada** Owen Sound, Ont. and Montreal, Quebec  
**Guth Lighting** St. Louis, Mo.  
**Hevi-Duty Electric** Goldsboro, N.C., Lake Geneva, Wisc. and Celina, Tenn.  
**Lindberg** Chicago and Gilberts, Ill., and Watertown, Wisc.  
**Nelson Electric** Tulsa, Okla. and Homer, La.  
**O.Z./Gedney** Terryville, Conn., Brooklyn, N.Y. and Shoemakersville, Pa.  
**Sierra Electric** Gardena, Calif. and Detroit, Mich.  
**Sola Basic Limited** Toronto and Bramalea, Ont.  
**Sola Electric** Elk Grove Village, Ill. and Ft. Payne, Ala.  
**Tempress** Los Gatos, Sunnyvale and Garden Grove, Calif. and Watertown, Wisc.  
**Warren Communications** Livingston, N.J. and Littleton, Mass.

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## Home Appliances

**General Signal Appliances** Welland, Ont.  
**G.S. Electric** Carlisle, Pa.  
**Regina** Rahway, N.J.

# Corporate Officers and Directors

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## International and Other Operations

Algemene Sein Industrie B.V.,  
*Utrecht, Netherlands*  
Ceilcote Ingenieros en Corrosion, S.A. de C.V.,  
*Naucalpan, Mexico*  
Ceilcote Korrosionstechnik GmbH,  
*Biebesheim/Rhein, Germany*  
Ceilcote Pty. Ltd.,  
*Devonport, Australia*  
Ceilcote U.K. Limited,  
*Sussex, England*  
Cincinnati Time Recorder Co. of  
Australia Pty. Limited,  
*Sydney, Australia*  
DeZurik,  
*Cramlington, England*  
DeZurik of Australia Pty. Ltd.,  
*Sunbury, Australia*  
DeZurik-France S.A.R.L.,  
*Bois Colombes, France*  
DeZurik-Mexico, S.A. de C.V.,  
*Mexico City, Mexico*  
GEC-General Signal Ltd.,  
*London, England*  
General Railway Signal Company de  
Argentina, S.A.,  
*Buenos Aires, Argentina*  
Hamworthy Hydraulics Limited,  
*Poole, England*  
Industrias Sola Basic, S.A.,  
*Mexico City, Mexico*  
Koyo Lindberg Limited,  
*Nara, Japan*  
Lightnin Belgium S.A.,  
*Frameries, Belgium*  
Lightnin Mixers Limited,  
*Poynton, England*  
Lightnin Mixers Pty. Limited,  
*Stanmore, Australia*  
Lindberg Tempress (Japan) Ltd.,  
*Nara, Japan*  
The Perolin Company, GmbH,  
*Hamburg, Germany*  
The Perolin Company Ltd.,  
*London, England*  
Perolin Italiana S.p.A.,  
*Genoa, Italy*  
Perolin Nippon, Ltd.,  
*Yokohama, Japan*  
Perolin Benelux, B.V.,  
*Rotterdam, Netherlands*  
Sola Basic Australia Ltd.,  
*Clayton and Victoria, Australia*  
Tempress Microelectronics  
(Hong Kong) Ltd.,  
*Hong Kong, B.C.C.*  
Tempress Microelectronics  
(Netherlands B.V.),  
*Hoogeveen, Netherlands*  
Terasaki-Nelson Ltd.,  
*Osaka, Japan*

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## Directors

**Samuel A. Casey†\***  
Chairman,  
Great Northern Nekoosa Corporation  
**F. Arnold Daum†\***  
Senior Partner,  
Cahill Gordon & Reindel, Attorneys  
**Philip R. Fortune\***  
Chairman of the Executive Committee  
**Edward W. Franklin\***  
Vice President,  
Secretary and General Counsel  
**Fred H. Gordon, Jr.†**  
Retired Chairman,  
Mixing Equipment Co., Inc.,  
a unit of the corporation  
**John P. Horgan†\***  
Private investor  
**Harold J. Hudson, Jr.**  
Chairman,  
General Reinsurance Corporation  
**Nathan R. Owen\***  
Chairman of the Board  
**Frank H. Roby**  
Senior Vice President  
and Group Executive  
**Gardner D. Stout**  
President-Emeritus,  
American Museum of Natural History  
**Harold A. Strickland, Jr.\***  
President  
**Gerald B. Zornow**  
Retired Chairman,  
Eastman Kodak Company

\*Member of Executive Committee

†Member of Audit Committee

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## Officers

**Nathan R. Owen**  
Chairman of the Board  
**Harold A. Strickland, Jr.**  
President  
**Frank H. Roby**  
Senior Vice President  
and Group Executive  
**Edward W. Franklin**  
Vice President,  
Secretary and General Counsel  
**Robert T. David**  
Vice President-Finance  
and Group Executive  
**William J. Ball**  
Vice President and Group Executive  
**Paul Gibian**  
Vice President and Group Executive  
**James F. Gormeley**  
Vice President-Manufacturing  
**William H. Gostlin**  
Vice President-Industrial Relations  
**John T. Rossello**  
Vice President-  
Manpower Development  
**Albert W. Buesking**  
Controller  
**Niall C. FitzPatrick**  
Treasurer

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## Group Executives

**Gerald E. Collins**  
**Arthur J. Herrmann, Jr.**  
**Edward C. Prellwitz**

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## Transfer Agent and Registrar

Marine Midland Bank—New York

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## Auditors

Peat, Marwick, Mitchell & Co.  
New York, New York

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## Listings

General Signal Corporation common  
stock is listed and traded on the New  
York and Pacific Coast stock  
exchanges under the symbol GSX.



GENERAL SIGNAL CORPORATION  
Ridge Park  
Hamford, Connecticut 06904

